



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,391	01/13/2006	Kohei Nanbu	1254-0302PUS1	8971
2292	7590	05/12/2010	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				EL SHAMMAA, MARY A
ART UNIT		PAPER NUMBER		
2883				
NOTIFICATION DATE			DELIVERY MODE	
05/12/2010			ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)
	10/564,391	NANBU ET AL.
	Examiner	Art Unit
	MARY A. EL SHAMMAA	2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 27 January 2010.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 9-23 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 9-23 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 03 December 2008 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 9 – 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Merrill et al (US 6,160,663).

3. The Examiner respectfully notes independent Claims 9, 16 and 23 are all directed to a backlight unit and recite the same fundamental features of Applicant's invention. Claim 23 is the most comprehensive of these claims. Thus, for the sake of brevity, Claims 9, 16 and 23 will be rejected together using the language of Claim 23.

4. Moreover, the Examiner respectfully notes independent Claims 13, 14, 20 and 21 are all directed to the LCD that incorporates the backlight unit of Claims 9, 16 and 23, respectively, and all recite the same fundamental features of Applicant's invention. Claims 14 and 21 are the most comprehensive of these claims. Thus, for the sake of brevity, Claims 13, 14, 20 and 21 will be rejected together using the language of Claim 14.

5. For Claims 9, 16 and 23, Merrill et al. discloses, in at least figure 1, a backlight unit comprising:

a reflective polarizing sheet (any one of films 106, 110, 112, and 114) having coefficients of expansion different between a first direction and a second direction (see column 7, lines 34 - 37) in a plane (Top View; i.e., the plane perpendicular to the viewing direction of user's eye 130; Figure 1 shows a cross-section of said plane) with the coefficient of linear expansion in the first direction larger than that in the second direction (see column 16, lines 30 – 59; and a second optical sheet (any one of films 106, 110, 112, and 114) that is an optical sheet different from the reflective polarizing sheet and that is disposed adjacently to the reflective polarizing sheet and in a separable manner in a direction normal to the plane thereof (see cross-section in figure 1, second sheet 106 is disposed adjacently to any one of films 110, 112, and 114), wherein, the coefficient of linear expansion of the second optical sheet in the direction corresponding to the first direction is approximated to the coefficient of linear expansion of the reflective polarizing sheet in the first direction, wherein the second optical sheet (106) is arranged on the side, away from light sources (108) provided in the backlight unit, of the reflective polarizing sheet (110, 112, and 114).

Regarding the linear expansion coefficients of the reflective polarizing sheet and the second optical sheet, Merrill expressly discloses counting warping due to various temperature ranges by adjusting the physical shape and the thermal expansion coefficients of all the films (106, 110, 112, and 114) of the display unit to correspond to the thermal expansion coefficient of the stainless steel frame (see column 7, line 62 – column 8, lines 43). Furthermore, Merrill expressly discloses in the examples beginning in column 21 how the coefficient of linear expansion of the second optical sheet in the direction corresponding to the first direction is

approximated to the coefficient of linear expansion of the second optical sheet in the first direction.

6. For Claims 13, 14, 20 and 21, Merrill et al. discloses, in at least figure 1 and as described above, the backlight unit described in Claims 9, 16 and 23. However, Merrill et al. further discloses, in at least figure 1, a liquid crystal panel (116) irradiated with light from the backlight unit (102 – 114), wherein the first optical sheet is a reflective polarizing sheet, and the transmission axis direction of the reflective polarizing sheet and the short side direction of the liquid crystal panel are arranged in parallel (see figures 1, 2A, 3A, and 4A).

7. As for Claims 10 – 12, 15, 17, 18, 19 and 22, Merrill et al. discloses, in at least figure 1, wherein the first optical sheet is a reflective polarizing sheet; the second optical sheet is at least any one of the sheets selected from the group consisting of a prism sheet, a wave sheet, a diffusion sheet, and an ITO sheet; and the first direction is the transmission axis direction of the reflective polarizing sheet; wherein the second optical sheet is formed of at least any one of the materials selected from the group consisting of a polycarbonate resin, a polystyrene resin, a polyacetal resin, and a nylon 6 resin; and wherein the second optical sheet is arranged on the side, away from light sources provided in the backlight unit of the first optical sheet.

Response to Arguments

Applicant's arguments filed January 27, 2010 have been fully considered but they are not persuasive.

Applicant argues that films 106, 110, and 112, of Merrill do not meet the limitation of claim 23 of a “reflective polarizing sheet”. Examiner wishes to clarify that these films do meet

the broader limitation of claim 9 of a “first optical sheet”. Regardless, this point it moot as film 114 of Merrill is a reflective polarizing sheet as claimed.

Applicant next argues that second sheet 106 is not adjacent to reflective polarizing film 114 based on the Merriam-Webster dictionary definition of “adjacent”. Applicant provides the definition of “adjacent” as – immediately preceding or following, absent of anything of the same kind in between. Using Applicant’s provided definition, Examiner respectfully disagrees with Applicant’s allegation that sheet 114 is not adjacent to sheet 106, when in fact the two sheets are “absent of anything *of the same kind* in between.” Furthermore, it is well known in the art to consider layers to be adjacent when they are not directly contacting one another since often intervening layers (for example, adhesive layers, electrode layers, coatings, films, etc.) are necessary for the components to function directly with one another and are still considered to be adjacent to one another. Examiner suggests claim language such as “in direct contact with” may better capture Applicant’s inventive concept. Finally, for exemplary purposes, Examiner would like to draw Applicant’s attention to polarizing layer 120, which could also be interpreted to meet the limitations of Applicant’s second optical sheet, thus rendering the adjacent argument moot.

Applicant thirdly argues that “Merrill does not show a film arranged on the side, away from light sources 108 provided in the backlight unit, of the reflective polarizer film 114,” as currently amended. Given this amendment, Examiner would again like to respectfully draw Applicant’s attention to the polarizing layer 120 shown in figure 1. Merrill shows a film 120 arranged on the side, away from light sources 108 provided in the backlight unit, of the reflective polarizer film.

Applicant finally argues that the warping problem of the present application is not addressed. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., warping) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, Merrill discloses expansion values of 85.0 ppm/ $^{\circ}$ C that can be used in both optical sheets, thus approximating the coefficient of linear expansion of both sheets (see at least col. 22, lines 43-51).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARY A. EL SHAMMAA whose telephone number is (571)272-2469. The examiner can normally be reached on M-F (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark A. Robinson can be reached on 571.272.2319. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mary A. El-Shammaa/
Patent Examiner, Art Unit 2883

/Andrew Schechter/
Primary Examiner, Art Unit 2883

May 4, 2010